

# Anatomical reproducibility through 3D printing in cranio-maxillo-facial defects [Reproducibilidad anatómica a través de impresión 3D en defectos cranio-maxilo-faciales]

de Moraes P.H.

Olate S.

Cantín M.

Assis A.F.

Santos E.

Silva F.O.

Silva L.O.

The planning and 3D reconstruction in craniofacial defects based on anatomical principles of symmetry and passive adaptation has evolved radically the past few years. This article recounts the possibility to develop personalized and extensive craniofacial implants. We present a case of a patient with a 10-year trauma sequel evolution; the patient lost the right frontal bone, supraorbital wall and part of the temporal fossa. From the computerized tomography, and by using Materialise software (3-Matic and Mimics). Subsequently, the printing was performed using the virtual planning with a laser printer in titanium where the piece was elaborated with the determined specifications in the planning; surgery was performed without complications in which the implant was placed via a coronal approach, which did not require any type of adaptation. After a two-year follow-up we observed a correct position, symmetry, absence of infection or any other alteration. It is concluded that the planning and 3D printing are suitable to perform craniofacial reconstructions with a low morbidity, shorter surgical time, and with an adequate facial symmetry and aesthetic return. © 2015, International Journal of Morphology. All rights reserved.

3D printing

Facial implant

Selective laser melting

